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The initial three residues MVD have been introduced due to restriction sites

Figure 1

YPLHEQHGM - VEITPYKPTW- CLGGLLTMV - EENILDFVRF - TYSAGIVQI - LLDFVRFMGV -EGGVGWRHW - HRHHHH (SEQ ID NO:94) 0.38 1.02 -0.07 0.39 0.55 0.85 -0.06 0.4 0.85 MINIORIANI - PYLFWLAAI – HRCQAIRKK – RRIYDLIEL – VQPPQLTLQV-GLCTLVAML - RLRAEAQVK -IEDPPFNSL -YLLEMLWRL GQGGSPTAM - AVLLHEESM - IALYLQQNWWTL-RAKFKQLL - SSCSSCPLSKI- TYGPVFMCL-QAKWRLQTL- RPPIFIRRL- VSFIEFVGW-P26A

0.39 -0.07

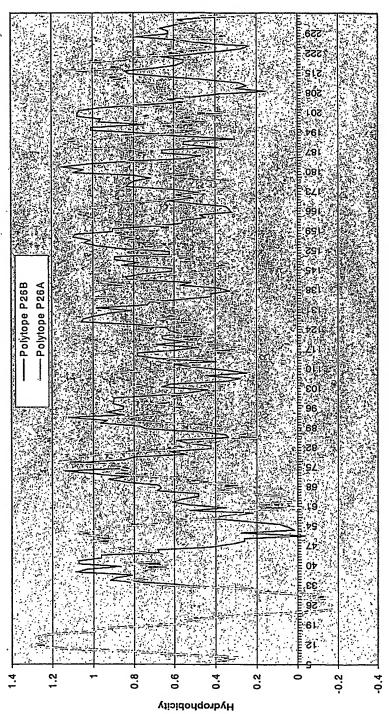
MVDFLRGRAYGL- PYLFWLAAI — HRCQAIRKK - RRIYDLIEL- GLCTLVAMI— RLRAEAQVK- IEDPPFNSL -TYSAGIVQI- LLDFVRFMGV-

P26B

eggvgwrhw - Ialylqqnwwtl - Rakfkqll - SSCSSCPLSKI — Tygpvfmcl — Qakwrlqtl - Rppifirrl - Vsfiefvgw —Yplheqhgm

VEITPYKPTW – CLGGLLTMV – EENLLDFVRF – YLLEMLWRL – GQGGSPTAM – AVLLHEESM –VQPPQLTLQV –ĤĤĤĤĤĤ (SEQ ID NO:95)

Hydrophobicity Index (Fauschere & Pliska)



Position of 9-mer moving window

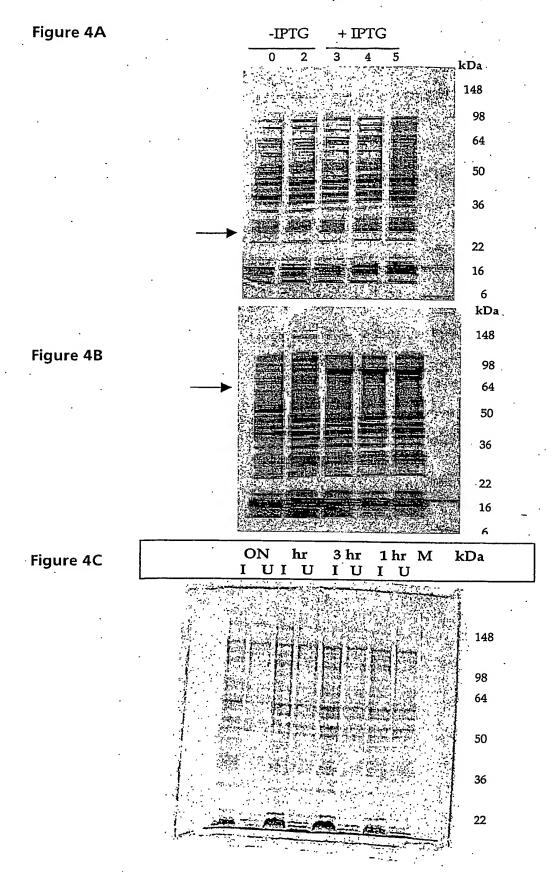
Figure 3A qp350/PT26A

MEDPGFFNVEIPEFPFYPTCNVCTADVNVTINFDVGGKKHQLDLDFGQLTPHTKAVYQPRGAFGGSENAT T-help epitope NLFLLELLGAGELALTMRSKKLPINVTTGEEQQVSLESVDVYFQDVFGTMWCHHAEMONPVYLIPETVPY IKWDNCNSTNITAVVRAQGLDVTLPLSLPTSAQDSNFSVKTEMLGNEIDIECIMEDGEISQVLPGDNKFN T-help epitope ITCSGYESHVPSGGILTSTSPVATPIPGTGYAYSLRLTPRPVSRFLGNNSILYVFYSGNGPKASGGDYCI QSNIVFSDEIPASQDMPTNTTDITYVGDNATYSVPMVTSEDANSPNVTVTAFWAWPNNTETDFKCKWTLT SGTPSGCENISGAFASNRTFDITVSGLGTAPKTLIITRTATNATTTTHKVIFSKAPESTTTSPTLNTTGF ADPNTTTGVDFLRGRAYGLPYLFWLAAIHRCQAIRKKRRIYDLIELVQPPQLTLQVGLCTLVAMLRLRAE 428 B8 A23 B27 B27 B46 ΑŻ AQVKIEDPPFNSLYLLEMLWRLGQGGSPTAMAVLLHEESMIALYLQQNWWTLRAKFKQLLSSCSCPLSK . B60 A2 B62 B35 B57/A2 **B8** ITYGPVFMCLQAKWRLQTLRPPIFIRRLVSFIEFVGWYPLHEQHGMVEITPYKPTWCLGGLLTMVEENLL B8 B7 B58 **A2** DFVRFTYSAGIVQILLDFVRFMGVEGGVGWRHWHHHHHH A2 B44 (SEQ ID NO:96)

Figure 3B gp350/PT26B

 ${\tt MEDPGFFNVEIPEFPFYPTCNVCTADVNVTINFDVGGKKHQLDLDFGQLTPHTKAVYQPRGAFGGSENAT}.$ T-help epitope ${\tt NLFLLELLGAGELALTMRSKKLPINVTTGEEQQVSLESVDVYFQDVFGTMWCHHAEMQNPVYLIPETVPY}$ IKWDNCNSTNITAVVRAQGLDVTLPLSLPTSAQDSNFSVKTEMLGNEIDIECIMEDGEISQVLPGDNKFN T-help epitope ITCSGYESHVPSGGILTSTSPVATPIPGTGYAYSLRLTPRPVSRFLGNNSILYVFYSGNGPKASGGDYCI QSNIVFSDEIPASQDMPTNTTDITYVGDNATYSVPMVTSEDANSPNVTVTAFWAWPNNTETDFKCKWTLT ${\tt SGTPSGCENISGAFASNRTFDITVSGLGTAPKTLIITRTATNATTTTHKVIFSKAPESTTTSPTLNTTGF}$ ADPNTTTGVDFLRGRAYGLPYLFWLAAIHRCQAIRKKRRIYDLIELGLCTLVAMLRLRAEAQ VKIEDPPF B8 A23 B27 B27 NSLTYSAGIVQILLDFVRFMGVEGGVGWRHWIALYLQQNWWTLRAKFKQLLSSCSSCPLSKITYGPVFMC A2 B44 B57/A2 **B8** LQAKWRLQTLRPPIFIRRLVSFIEFVGWYPLHEQHGMVEITPYKPTWCLGGLLTMVEENLLDFVRFYLLE B58 B35 B44 A2 MLWRLGQGGSPTAMAVLLHEESMVQPPQLTLQVHHHHHH (SEQ ID NO:97) B62 B35 B46

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Figure 5

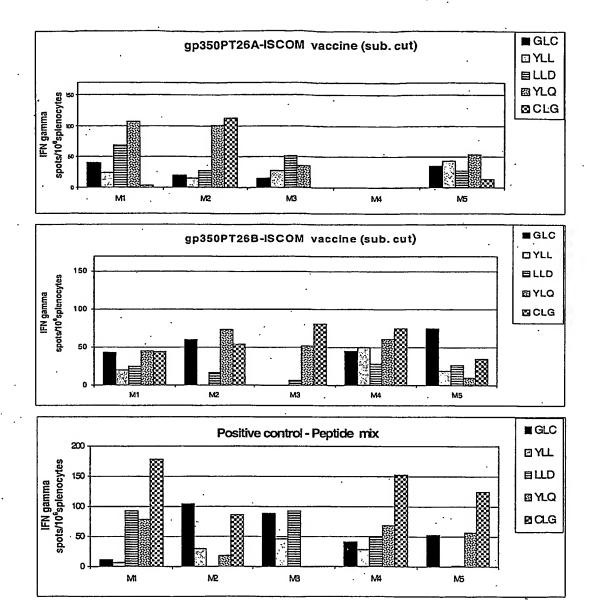


Figure 6

EBV-NPC								_		
1.02	-0.07	0.82	96.0	-0.06	0.4 . 0.88	0.88	. 0.01	. 0.45	0.85	
SSCSSCPLSKI-	SCSSCPLSKI - HRCQAIRKK - CLGGLLTMV - LTAGFLIFL - RLRAEAQVK - IEDPPFNSL - LLSAWILTA - RRRWRRLTV - PYLFWLAAI - YLLEMLWRL -	LGGLLTMV -	LTAGFLIFL-1	RLRAEAQVK-	· IEDPPFNSL -	LLSAWILTA-	- RRRWRRLTV -	PYLFWLAAI-	YLLEMLWRL –	
0.18	0.64	0.85	0.20	. 29.0	0.83	0.32	0.71	0.34	0.78	
GQGGSPTAM	-VMSNTLLSAW	- ALLVLYSFA	- RAKFKQLL	- IALYLQQNV	V - TYGPVFM	CL - QAKWŘL	QTL - YLQQNW	WTL - YPLHE	SQGGSPTAM - VMSNTLLSAW - ALLVLYSFA - RAKFKQLL - IALYLQQNW - TYGPVFMCL - QAKWRLQTL - YLQQNWWTL - YPLHEQHGM - CPLSKILL -	
0.04										
(86-ON CI OEO ID NO:98)	(89:ON CI O									

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HIIVa

	WYTVYYGV -	0.53	TEELROHL - MINNPPIPV - VILWORPLV - WASRELERF - LLWKGEGAV - YTAFTIPSI - IYQEPFKNLK - SLYNTVATL - AIIRILQQL - AIFQSSMTK - VIYQYMDDL -				HI values (n=3): 1.16 0.98 1.08 1.08 1.04 1.18 1.19 1.14 1.30 1.32 1.30 1.38 1.39 1.39 1.44 1.46 1.44 1.52 1.55 1.49 1.50 1.54 1.52 1.73 1.20
0.71	IILGLNK - KI	0.35	- AIFQSSMTF		٠		150 1.54
0.45	KEAL - KRW	29.0	- AIIRILQQL				1.52 1.55 1.4
-0.02	EYW - EIKDI	0.5	SLYNTVATL				1.46 1.44 1
. 92:0	V – TWETWWI	0.27	YQEPFKNLK-		SEQ ID NO:99)		39 1.39 1.44
0.44	-KYKLKHIW	69:0	YTAFTIPSI – I	90:0	- нинини (-	1.30 1.38 1.3
-0.16	PGGKKKYKL	0.48	LWKGEGAV	0.57	TLNAWVKVV		4 1.30 1.32
	LVKLWYQL - F	0.22	VASRELERF - L	0.59	ALVEICTEM -		1.18 1.19 1.1
1 0.8	KEPVHGV - P	0.69	LWQRPLV - V	0.57	LAWVPAHK -	•	8 1.08 1.04
26 0.44	RPGGKKK-II	0.47	NNPPIPV - VI	0.36	2DLNTML - Y		1.16 0.98 1.0
0.98 -0.26	IPIVAIVALV - RLRPGGKKK - ILKEPVHGV - PLVKLWYQL - RPGGKKYKL - KYKLKHIVW - TWETWWTEYW - EIKDTKEAL - KRWIILGLNK - KLWYTVYYGV -	0.14	KIEELRQHL - MI	0.61	LVGPTPVNI - TPQDLNTML - YLAWVPAHK - ALVEICTEM - TLNAWVKVV - HHHHHH (SEQ ID NO:99)		HI values (n=3):

ILKEPVHGV - KRWIILGLNK - TLNAWVKVV - KIEELRQHL - YTAFTIPSI - WASRELERF - PLVKLWYQL - LVGPTPVNI - IPIVAIVALV - SLYNTVATL - MTNNPPIPV -LLWKGEGAV – TWETWWTEYW – AIFQSSMTK – RLRPGGKKK – ALVEICTEM – KLWVTVYYGV – YLAWVPAHK – AIIRILQQL – EIKDTKEAL – VTLWQRPLV – 0.5 -0.05 0.98 0.61 IYQEPFKNLK - VIYQYMDDL - TPQDLNTML - RPGGKKKYKL - KYKLKHIVW - HHHHHH (SEQ ID NO:100) 0.8 0.22 . 69:0 0.14 0.57 0.44 HIVb

. HI values (n=3): 1.46 1.16 1.40 1.05 1.71 1.63 2.39 2.09 1.95 1.45 1.71 1.59 0.85 0.68 1.04 1.87 1.95 1.22 1.34 0.94 1.49 1/16 0.73 0.64 0.32

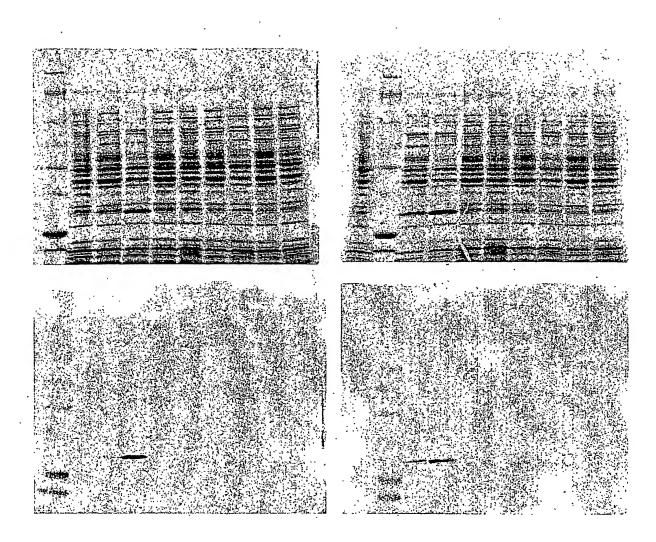
Figure 8

HCVa									
0.94	-0.3	0.61	6.0	-0.07	0.47	0.82	0.15	0.51	0.75
LLFNILGGWA	' – KTSERSQPR	- FLLLADARV	- LLFLLLADA	- RLGVRATRK	-GVAGALVA	FK - LPGCSFSI	F-RMYVGGVE	HR - VAGALVA	LLFNILGGWV – KTSERSOPR – FLLLADARV – LLFLLLADA – RLGVRATRK – GVAGALVAFK – LPGCSFSIF – RMYVGGVEHR – VAGALVAFK – DLMGYIPLV –
0.33	0.55	0.73	0.34	0.56	0.72	0.34	0.56	99.0	0.35
· LIFCHSKKK-	ILAGYGAGV-	- HMWNFISGI -	QLFTFSPRR-	VGIYLLPNR - I	WAKHIMWNE	- YLVTRHAD	V – LSAFSLHSY -	-WMINRLIAFA	LIFCHSKKK – ILAGYGAGV – HMWNFISGI – QLFTFSPRR – VGIYLLPNR – FWAKHMWNF – YLVTRHADV – LSAFSLHSY – WMNRLIAFA – YLLPRRGPRL –
0.58	0.67	0.41	0.61	0.67	0.44	0.04			
YLVAYQATV	RLIVFPDLG\	YLVAYQATV – RLIVFPDLGV – TLGFGAYMSK – IPFYGKAI – VLVGGVLAA – CTCGSSDLY – HFHHFHH (SEQ ID NO:101)	K - IPFYGKAI	-VLVGGVLAA	-CTCGSSDL)	/- нинини (₍	SEQ 1D NO:101)		
		· .							-
HI values (n=	3): 1.25 1.21	1.44 1.3 1.22	1.44 1.48 1	.41 1.59 1.63	1.61 1.62 1.	63 1.62 1.62	1.62 1.58 1.59	1.61 1.60 1.	HI values (n=3): 1.25 1.21 1.44 1.3 1.22 1.44 1.48 1.41 1.59 1.63 1.61 1.62 1.63 1.62 1.62 1.62 1.58 1.59 1.61 1.60 1.66 1.69 1.69 1.72 1.15
			•			•	•	-	-
HCVb									
.0.34	0.68	0.44	0.56	0.55	0.33	0.73	0.61	6.0	0.56
YLVTRHADV	- WMNRLIAF	A - CTCGSSDLY	-VGIYLLPNR	- ILAGYGAGV	- LIFCHSKKK	- HMWNFISG	YLVTRHADV – WMNRLIAFA – CTCGSSDLY – VGIYLLPNR – ILAGYGAGV – LIFCHSKKK – HMWNFISG – IFLLLADARV – LLFLLLADA – LSAFSLHSY –	- LIFLLADA -	LSAFSLHSY –
0.47	-0.3	-0.07	0.75	0.67	0.94	0.58	0.35	0.72	0.34
GVAGALVAF	K – KTSERSQPI	R – RLGVRATRA	(-DLMGYIPL)	V VLVGGVLA	A – LĻFNILGG	:wv - YLVAYQ	ATV - YLLPRRG	PRL - FWAKHI	GVAGALVAFK – KTSERSQPR – RLGVRATRK – DLMGYIPLV – VLVGGVLAA – LLFNILGGWV – YLVAYQATV – YLLPRRGPRL – FWAKHIMWNF – QLFTFSPRR –
0.82	0.61	. 0.15	0.41	29.0	0.51	0.04			
LPGCSFSIF - L	LPGCSFSIF - IPFYGKAI - RMYVGGVEHR	PYVGGVEHR-T	LGFGAYMSK.	-RLIVFPDLGV	-VAGALVAFI	(-HHHHHHH)	- TLGFGAYMSK - RLIVFPDLGV - VAGALVAFK - HHHHHHH (SEQ ID NO:102)		

Hivalues (n=3): 146 1.68 1.55 1.44 1.61 1.67 2.24 2.07 1.93 0.73 0.10 0.38 1.35 2.36 2.19 1.87 1.65 1.41 1.88 1.77 1.58 1.17 1.23 1.59 1.22

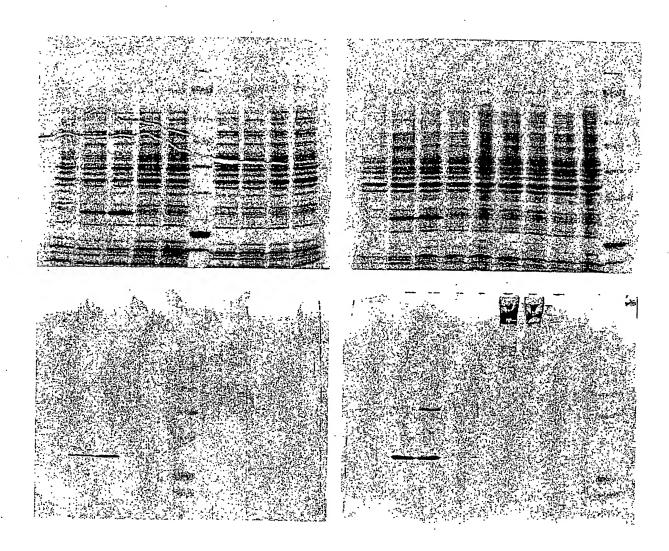
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Figure 9



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Figure 10



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